

Apple in Education

iPad

Mac

iPod touch and iPhone

iTunes U

Profiles

Resources

Useful to everyone. Right from the start.



The arrival of OS X Lion ushers in a new era of accessibility for students of all abilities. Every Mac comes equipped with dozens of assistive technologies — many of which you won't find in other operating systems at any price. And with the development of universal access features for iPhone, iPad, and iPod, Apple is taking these technologies to a new level.



Literacy & Learning

Every Mac includes a range of tools that help students get organized, stay focused, improve reading comprehension, and more.

[Learn more](#)

Vision

The Mac comes equipped with a screen reader, magnification tools, and dozens of other powerful features for blind and low-vision students.

[Learn more](#)

Hearing

The Mac operating system provides tools that help deaf and hard-of-hearing students manage their computers, communicate, and express themselves.

[Learn more](#)

Physical & Motor Skills

Students with physical or motor-skills disabilities can customize the settings on a Mac to assist them with typing, clicking, navigating, and more.

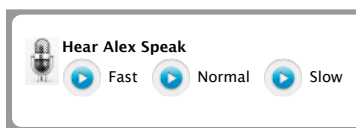
[Learn more](#)

Literacy & Learning

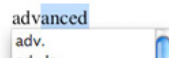
There are many built-in features on a Mac that accommodate learning disabilities and help improve productivity and academic performance in reading proficiency, math, spelling, and more.

Text to Speech

For students with cognitive disabilities, the Mac is equipped with Text-to-Speech (TTS) technology that can read aloud a selection of text or an entire document. Mac TTS includes various male and female voices, including a more natural-sounding voice named Alex. Alex actually pauses to "breathe" when speaking long passages, and sounds as good at high speed as he does at normal speaking rates. Mac TTS works with all applications that support the OS X Speech engine, including Mail, iChat, and TextEdit.



Word Completion



Spaces

Staying on task is simpler with Spaces, a feature that lets students group applications and documents into separate areas for each subject (math, science, and so on).

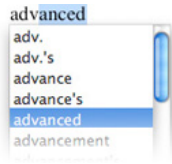
Built-in Spelling and Grammar Checking

Every Mac provides students with the benefits of resources such as the *New Oxford American Dictionary*, *Oxford American Writer's*



Students can avoid spelling mistakes and reduce keystrokes with the word completion

feature of the Mac. After typing a few characters, a student can press the Escape key to open up a list of words beginning with those characters. It highlights correct word usage, and it's available in most applications.

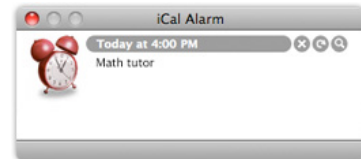


Finder

Assignments are always easy to find with the Finder, which can display Mac documents as images, icons, or text. There's also Spotlight, a searching feature built into the Mac that finds all files related to a search term, wherever they are located on the computer.

Thesaurus, Apple

Dictionary, Wikipedia, scientific reference materials, and grammar and pronunciation guides. All of the Mac applications access the same dictionaries, ensuring consistency when grammar- and spell-checking documents. If a student adds new words to the spelling or grammar dictionary in one application, they are automatically applied to all other applications.



iCal

iCal, a built-in calendar application, brings order to a busy student's life by keeping track of and sending reminders for class schedules, homework deadlines, or team meetings.

Grapher

A full-featured graphing calculator, Grapher is a powerful tool for math at any level. It enables the real-time analysis of mathematical equations, and it's easy to use.



iPhone, iPad, and iPod for the learning disabled

iPhone, iPad, and iPod touch are powerful tools for distributing lessons, connecting to iTunes content while on the go, and accessing useful apps created specifically for students with learning disabilities.

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Vision

In addition to basic features that allow blind and low-vision students to magnify the screen, adjust display contrast, and increase cursor size, other technologies unique to the Mac are built right into the

VoiceOver



VoiceOver is an advanced screen-reading technology that goes well beyond Text

to Speech. Students can hear a spoken description of what's onscreen and can control their computer using only the keyboard (no mouse required). They can also use VoiceOver to browse the web, chat, send and receive email, use iTunes,



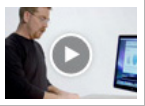
Refreshable Braille Display Support

VoiceOver supports more than 40 different models of refreshable braille displays — including wireless Bluetooth displays — that work with the Mac as soon as they're connected. OS X Lion includes built-in support for more than 80 braille tables

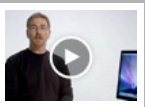
operating system.

edit text documents, and more.


VoiceOver is simple to use. Settings can be customized, and preferences can be saved on a USB flash drive and applied to other Mac computers. And OS X Lion includes built-in voices that speak 22 languages. So schools don't need to set a particular computer aside for Special Education use — every Mac can be used by any student worldwide.



VoiceOver
Play the video



Screen Magnification
Play the video



Setting Up the Desktop and Finder
Play the video

Text to Speech

The Mac is equipped with speech technologies that include talking alerts (which speak the content of dialogs and alerts), a talking calculator, a talking clock, and Text to Speech (TTS), a feature that reads selected text aloud. TTS works with all applications that support the OS X Speech engine, including Mail, iChat, and TextEdit.

serving a wide range of languages. Best of all, VoiceOver exhibits spoken output as text or braille onscreen, allowing for more effective collaboration with other students, even those without visual disabilities.



OS X includes a feature called braille mirroring that allows one Mac to control multiple USB braille displays simultaneously. So teachers can lead an entire class through the same lesson at the same time, even if the students are using different models of braille displays.



Screen Magnification

With a feature called Zoom, students can use picture-in-picture magnification, allowing them to see the zoomed area magnified by up to 20x in a separate window while keeping the rest of the screen at its native size. Text, graphics, and even video can be magnified without affecting system performance.



iPhone, iPad, and iPod touch for blind and low-vision students

The iPod nano and iPod shuffle feature spoken menu technology that blind and low-vision students can use to easily find a song or



playlist. They can access mobile content, apps, and more using the iPhone, iPad, or iPod touch, which all feature screen magnification and gesture-based VoiceOver.

Learn more about iPod features for visually impaired students

Learn more about iPhone features for visually impaired students

Learn more about iPad features for visually impaired students



Accessibility Navigation

Accessibility features come standard in iPhone to help people with disabilities experience everything it has to offer. Watch video

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Hearing

For deaf and hard-of-hearing students, every Mac comes with powerful tools ranging from caption support to Internet-based sign-language communication to auditory comprehension tools.

iChat



Every MacBook and iMac is equipped with a built-in iSight camera and Apple's iChat software. iChat allows students to collaborate in real time with teachers or other students using text messages or video conferencing. It delivers fast frame rates and high-quality video so students can communicate clearly using sign language. Students can participate in multiple chats at the same time, engage in group chats, share their work with others during a chat session, and even simultaneously edit the same document.



Closed Captioning



With a Mac, displaying open and closed captioning in QuickTime and DVD Player is simple. Students can also download and watch captioned movies and other iTunes content on iPhone, iPad, and iPod touch and even PCs (using QuickTime for Windows). Learn about creating accessible [iTunes U content](#)

GarageBand

GarageBand is part of the award-winning iLife suite of digital media applications that is included with every Mac. Schools are using GarageBand to improve auditory comprehension among deaf and hard-of-hearing students — particularly those adjusting to new cochlear implants. Teachers create podcasts of conversational speech and download them to an iPod or iPad. Students use the podcasts to learn inflection and how to differentiate one voice from another.

Photo Booth



Photo Booth, an application for taking photos and video using the iSight camera, gives deaf and hard-of-hearing students another way to communicate using sign language. With one click, a student can record a video message. Then with a second click, that video can be emailed to others.



iPhone, iPad, and iPod for the deaf and hard-of-hearing

With iPhone, iPad, and iPod touch, students can easily activate Mono Audio and access apps developed to enhance these media players for the deaf and hard-of-hearing.

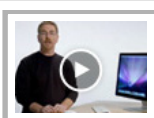
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Physical & Motor Skills

With the Mac, students with physical and motor-skill challenges can control their computer using the keyboard, mouse, or trackpad — whichever works best for them.

Automator

Using Apple's Automator application, routine tasks that might overwhelm a student can be executed with a single click. Simply record the task once — from that point on, Automator will perform the entire task on demand and with little effort.



Improving Keyboard Efficiency
Play the video



Adjusting Mouse and Trackpad Sensitivity
Play the video

Sticky Keys

Keyboard shortcuts may be helpful for many students, but not for those who have difficulty pressing multiple keys at the same time. So Apple designed Sticky Keys, which lets students enter key combinations (called "chords") — such as Command-Q (for Quit) or Shift-Option-8 (to enter the ° symbol) — by pressing them in sequence instead of simultaneously.

Slow Keys

Students who have difficulty typing can avoid unintended multiple keystrokes by activating Slow Keys. This feature adds a delay between when a key is pressed and when its action is accepted, so there's less chance of a mistake.

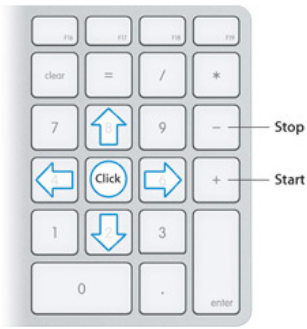
Mouse Keys

Students who find it challenging to control a mouse can use Mouse Keys to move the mouse pointer using the keys on a numeric keypad. This can make it easier to navigate menus, windows, toolbars, color palettes, and more.



Multi-Touch Trackpad

The unique Multi-Touch technology built into every new MacBook gives students a whole new way to navigate the screen, zoom in on text, flip through a photo library, or fine-tune a photo using simple gestures with their fingertips.



Keyboard Shortcuts



Using keyboard shortcuts (or key combinations), students can quickly perform a wide range of tasks without touching a mouse or opening menus. In addition to the many predefined keyboard shortcuts included with the Mac operating system, students can create their own or remove shortcuts they don't use. Shortcuts can be systemwide or made to work only in specific applications.

Inkwell

The Mac also comes with built-in handwriting recognition technology called Inkwell. Students simply connect a graphics tablet to their Mac and write on the tablet using a stylus. Inkwell translates what they've written into onscreen text.

Inkwell supports several standard stylus gestures, making it easy to select, edit, and delete text. It can also convert English, French, and German text.



iPhone, iPad, and iPod for the motor-skills impaired

iPhone, iPad, and iPod touch use high-resolution Multi-Touch screens, ideal for those who have difficulty using a traditional keyboard and mouse. Students can also access a variety of apps designed to enhance iOS devices for those who have difficulty speaking.

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Resources

Third-Party Solutions

For Mac

From screen loupes that magnify portions of the screen to software that speaks PDF documents, a wide range of hardware and software products have been developed for Mac users with special needs.

[Learn more](#)

For iPhone, iPad, and iPod

Adapt your iOS devices using products that bear the Made for iPhone, Made for iPad, and Made for iPod logos. Add new software features and functions by downloading apps from the App Store, available on iTunes and

Community Resources

ATMac

ATMac reports on all Apple products with a focus on disability. Its audience includes people with a disability, assistive and adaptive technology users, teachers, educators, content producers, and application developers. [Learn more at ATMac.org](#)

AssistiveWare

AssistiveWare develops innovative accessibility software for people with vision, motor-skills, speech, and language impairments. It provides cutting-edge assistive technology products, including communications

Getting Started

Apple Technology for Diverse Learners

This guide, written by Apple Distinguished Educators, shows how to personalize a Mac to suit a learner's needs and help get the most out of the features and applications on the Mac. [Download PDF](#)

Apple's Commitment to Accessibility

For more than 20 years, Apple has developed innovative solutions for people with disabilities. With these features, everyone can access, enjoy,

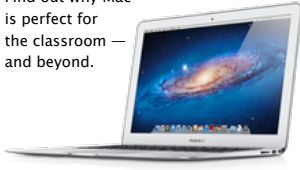
directly from iOS devices.
Learn more

solutions for people who have
difficulty speaking.
Learn more at AssistiveWare.com

and get the most from a Mac,
iPhone, iPad, iPod, and Apple TV.
Learn more

Mac

Find out why Mac
is perfect for
the classroom —
and beyond.



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on-the-go learning.



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